Signature

Date

Printed name

James W. Judge

March 2, 2005

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PTO/SB/21 (09-04) Approved for use through 07/31/2006. OMB 0851-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMR control number. **Application Number** 10/065,552 TRANSMITTAL Filing Date October 29, 2002 First Named Inventor **FORM** Shigeru Sawada Art Unit 2814 Examiner Name Wai Sing Louie (to be used for all correspondence after initial filing) Attorney Docket Number 31 39.002-AG Total Number of Pages in This Submission **ENCLOSURES** (Check all that apply) After Allowance Communication to TC Fee Transmittal Form Drawing(s) Appeal Communication to Board Licensing-related Papers Foo Attached of Appeals and Interferences Appeal Communication to TC Petition Amendment/Reply (Appeal Notice, Brief, Reply Brief) Petition to Convert to a After Final Proprietary Information Provisional Application Power of Attorney, Revocation Status Letter Affidavits/declaration(s) Change of Correspondence Address Other Enclosure(s) (please Identify Terminal Disclaimer Extension of Time Request below): Request for Refund Express Abandonment Request • CD, Number of CD(s) Information Disclosure Statement Landscape Table on CD Certified Copy of Priority Remarks Document(s) Reply to Missing Parts/ Incomplete Application Reply to Missing Parts under 37 CFR 1.52 or 1.53 SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT Firm Name Judge Patent Firm

# CERTIFICATE OF TRANSMISSION/MAILING I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below: Signature Typed or printed name James W. Judge

Rég. No.

42,701

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office. U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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This collection of information is required by 37 CFP-1.135. The Information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the Individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

App. No.

10/065,552

Confirmation No. 7687

**Applicant** 

Shigeru Sawada, et al.

Filed

October 29, 2002

Tech. Cntr./Art Unit

2814 -

Examiner

Wai Sing Louie

Docket No.

39.002-AG

Customer No.

29453

Honorable Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

# INFORMATION DISCLOSURE STATEMENT

Sir:

This constitutes an Information Disclosure Statement pursuant to 37 C.F.R. §§ 1.97 and 1.98. The attached documents listed on the accompanying Form PTO/SB/08A are hereby brought to the Examiner's attention in the patent application identified above.

## <u>REMARKS</u>

Of the three presently submitted references, i.e., Cite Nos. F1 and O2 as listed on Form PTO/SB/08A, are not in English. These three references were cited in a communication from the Japanese Patent Office in a counterpart Japanese application.

# Concise Explanation of Relevance/Copy of Translation Pursuant to 37 C.F.R. § 1.98(a)(3)

As a concise explanation of the relevance of the presently submitted Japanese-language references, an English translation of pertinent portions of the Japanese Patent Office communication—which was in Japanese Pat. App. No. 2001-340527, the foreign patent application on the basis of which priority is claimed in the present application—is submitted herewith.

03/03/2005 EKOLI1 00000002 10065552

App. No. 10/065,552 IDS Submission dated March 2, 2005

(A copy of the Japanese Patent Office communication in its entirety, with borders drawn around the text containing the rejections, follows the English translation.)

Furthermore, a partial English translation of Cite No. F1 has been made available to Applicant's representative and is being submitted herewith. Borders have been drawn around the sections in the Japanese original text corresponding to the partial English translation.

Furthermore, an English translation of the entirety of Cite No. O2 is attached to the back of the reference.

As the date on which the Japanese Patent Office communication citing the presently submitted information was November 16, 2004, an attestation under 37 C.F.R. § 1.97(e) cannot be made. Accordingly, a credit-card payment form authorizing payment of the fee under 37 C.F.R. § 1.17(p), together with a Fee Transmittal form, also accompanies this paper.

The Examiner is respectfully requested to consider these references, and to indicate so on the accompanying Form PTO/\$B/08A and make the document of record in the present application.

Respectfully submitted,

March 2, 2005

James W. Jyldge

Registration No. 42,701

JUDGE PATENT FIRM

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305-938-7119

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Examiner

PTO/SB/08A (10-01)
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control number. Complete if Known Substitute for form 1449A/PTO **Application Number** 10/065.522 INFORMATION DISCLOSURE October 29, 2002 Filing Date STATEMENT BY APPLICANT First Named Inventor Shigeru Sawada 2814 Art Unit (use as many sheets as necessary) Wai Sing Louie Examiner Name Attorney Docket Number 39.002-AG Sheet of

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1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at <a href="www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. 6 Applicant is to place a check mark here if English language Translation is ettached.

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control number. Complete if Known Substitute for form 1449B/P70 10/065,522 **Application Number** INFORMATION DISCLOSURE October 29, 2002 Filing Date Shigeru Sawada STATEMENT BY APPLICANT First Named Inventor 2814 Group Art Unit Wai Sing Louie (use as many sheets as necessary) **Examiner Name** Attorney Docket Number 39,002-AG 2 2 of Sheet

Examinor Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the litem (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	ī		
_	01	V. Gopal, et al., "Electrochemical Capacitance Voltage Profiting of the Narrow Band Gap Semiconductor InAs," Journal of Electronic Materials, Vol. 29, No. 11, 2000 pp. 1333-1339.			
	02	H. Yoshitake, "CV Evaluation Apparatus," Collection of Toshiba Technology Disclosure, Vol. 16-17, March 23, 1998, p. 139.	·		
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<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered, Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

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Reference No. 1011402

Dispatch No. 417632

Dispatch Date: November 16, 2004

Notification of Reasons for Rejection

Patent Application No.: Patent Application No. 2001-340527

Draft Date: November 10, 2004

JPO Examiner: Kenichiro HASHIMOTO 3031 4R00

Representatives/Applicant: Mr. Hisao FUKAMI (and four others)

Applied Law: Patent Law Section 29(2)

This application is rejected for the following reasons. An opinion, if any, should be submitted within 60 days from the dispatched date of the notification.

### Reasons

3. The inventions in the claims listed below of the subject application should not be granted a patent under the provision of Patent Law Section 29(2) since it could have easily been made by persons with ordinary skill in the art to which the inventions pertain, on the basis of the inventions described in the following publications which were distributed in Japan or foreign countries or the inventions which were publicly available through electrical communication lines prior to the filing of the subject application.

Note (About the cited documents, etc., see the list of the cited documents, etc.)

# Reason 3

- Claims 1 and 2
- Cited reference 1 (V. Gopal et al.)
- Remark

In cited reference 1, there is described (refer, in particular, to the item 'Experiment') that, when a C·V measurement is conducted by bringing an electrolytic solution into contact with an InAs membrane in order to obtain carrier density, an EDTA aqueous solution is used as the electrolytic solution. And it is publicly well-known in the C·V measurement to make the application voltage high to obtain the carrier density at a deep location. Thus, in the invention set forth in cited reference 1, those skilled in the art could have readily conceived of applying a voltage exceeding 10 V for the measurement of the carrier density of the InAs membrane at a deep location.

- Claim 4
- · Cited references 1 and 2 (V. Gopal Stal. & Toshiba Toch. Disclosure)
- Remark

In a C·V measurement using a liquid electrode, use of the tyron liquid as the electrolytic solution for the liquid electrode is well known, as is set forth, for example, in cited reference 2.

- Claim 5
- · Cited reference 3 (Japanese Pat. App Flux. No. 50-86986)
- Remark

In cited reference 3 (refer to, in particular, p. 2, line 7 in the right lower column to p. 3, line 2 of the left upper column.), there is described that, in a C-V measurement, InSb is used as a sample, and that a liquid metal such as an In-Ga alloy, mercury, etc. is used as an electrode. Thus, in the invention set forth in cited reference 3, those skilled in the art could have readily conceived of using Ga, which is liquid around room temperature, as the electrode.

- Claims 7 and 8
- Cited reference 1 (V. Gozal et. al)
- Remark

Non-destructive estimation of carrier density means that the physical properties of the wafer itself do not change at all prior to and after the measurement. Accordingly, the wafer in the invention set forth in Claims 7 and 8 has no difference from the wafer that has been subjected to the C·V measurement according to the method set forth in cited reference 1, and also no difference from the bare wafer that is not subjected to the C·V measurement.

# List of the cited documents, etc.

- V. Gopal et al., Journal of ELECTRONIC MATERIALS, 2000年11月, Vol. 29. No. 11, p.1333-1339
- Collection of Toshiba Technology Disclosure, March 23, 1998, Vol. 16-17,
   p139
- 3. Japanese Patent Application Publication No. 50-86986

# Record of results of prior art search

• Technical fields to be searched:

IPC 7th edition H01L 21/66

Prior art documents

Japanese Patent Application Publication No. 2001-144154
Japanese Patent Application Publication No. 59-143339
Japanese Patent Application Publication No. 11-337490
Japanese Patent Application Publication No. 61-141127
The record is not a component of the reasons for rejection.

If you have any questions regarding this Notification of Reasons for Rejection and/or would like to have an interview, please contact the following:

Mr. Kenichiro Hashimoto of Electronic Materials Manufacturing Division,

Third Patent Examination Department.

TEL: 03 (3581) 1101 (ext. 3469)

FAX: 03 (3501) 0605